

**REVIEW OF ADVISORY REPORT  
FROM  
SEDAR 7 REVIEW WORKSHOP  
APRIL 4–7, 2005  
NEW ORLEANS, LOUISIANA**

**Prepared by**

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**for**

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Independent System for Peer Review**

**17 June 2005**

## EXECUTIVE SUMMARY

The SEDAR 7 Review Workshop for Gulf of Mexico red snapper was held in New Orleans from 4-7 April 2005. The Review Workshop Panel recommended that age-0 snapper be included in the assessment base case to account for bycatch mortality in the shrimp fishery. This was contrary to the recommendation of the Assessment Workshop, which had argued that shrimp bycatch mortality on age-0 snapper was insignificant due to strong density-dependent natural mortality. In their initial draft of the advisory report, the Assessment Team presented two sets of model runs, those supported by the Review Workshop and those supported by the Assessment Workshop.

Subsequently, a revised advisory report that used only age-0 snapper runs was written by the Assessment Team. NMFS-SEFSC requested that the SEDAR 7 Review Panel consider the revised report. The Terms of Reference supplied by email with the revised advisory report were: (1) review the red snapper assessment summary report and determine whether the report accurately represents the recommendations of the Review Workshop Panel; (2) review the advisory report recommendations for Sustainable Fisheries Act management criteria and determine whether the relative merits and risks of alternative criteria are accurately presented; (3) if the Panel determines that the advisory report is insufficient with regard to TOR (1) or (2), outline specific actions necessary to correct the deficiencies.

The revised report was reviewed by the Panel via email during the week of 13-17 June 2005. The revised report uses only age-0 based runs and the projections use the average of recent recruitment as recommended by the Panel. Therefore, I consider that the report is consistent with the Panel's previous recommendations and satisfies TOR 1. The revised report uses benchmarks based on  $SPR_{30\%}$  rather than yield per recruit based  $F_{MSY}$  and  $B_{MSY}$ . I support the proposed  $SPR_{30\%}$  based benchmarks. I see them as consistent with MSY concepts and believe that the 30% level is appropriate for red snapper. In my opinion, given the required brevity of the document, the brief wording in the revised report under "Status Determination Criteria" adequately satisfies TOR 2.

## **BACKGROUND**

The SEDAR 7 Review Workshop for Gulf of Mexico red snapper was held in New Orleans from 4-7 April 2005. The SEDAR process normally involves a Data Workshop, an Assessment Workshop, and a Review Workshop (RW). For red snapper, the process involved two Assessment Workshops and spanned more than 12 months. This was due to the complex nature of the red snapper assessment and the problems encountered with the original choice of assessment method.

Two reports were produced subsequent to the RW: the Consensus Summary Report (prepared by the RW Panel) and the Advisory Report (prepared by the Assessment Team). The Advisory Report was not part of the RW's terms of reference. However, the Review Panel did provide some guidance to the Assessment Team on the model runs to include in the Advisory Report. The model run selected by the Review Panel as a base case assessment differed from the assessment presented to the meeting by the Assessment Team. The second Assessment Workshop had agreed to exclude age-0 red snapper from the assessment despite the bycatch of age-0 (and age-1) red snapper in the shrimp fishery. This is valid if density dependent mortality effects are so strong on age-0 snapper that the bycatch from the shrimp fishery is insignificant. The Review Panel did not accept this argument and selected a base case which included age-0 red snapper. The Advisory Report, as first drafted by the Assessment Team, contained an equal number of model runs with and without age-0 red snapper (Anon. draft c.) This was contrary to the Panel's recommendation during the RW.

Subsequently, a revised advisory report that uses only age-0 snapper runs was written by the Assessment Team (Anon. draft a & b). NMFS-SEFSC requested that the SEDAR 7 Review Panel consider the revised report: 1) review the revised assessment summary report to evaluate consistency with the Review Panel's previous recommendations, and 2) recommend a preferred benchmark that is appropriate for the advisory report under the Sustainable Fisheries Act.

## **REVIEW ACTIVITIES**

I received the revised draft advisory report by email on 12 June 2005 (Anon. draft a.). The first email correspondence from a member of the Review Panel was on 15 June from Graham Pilling. Amongst other questions, he asked which results were actually in the revised report – were they the age-0 snapper runs? The Assessment Team leader promptly replied with answers to the questions and with additional material (Anon. draft b., draft c., Porch 2005, and spreadsheets). I read the Consensus summary Report to refresh my memory with regard to the Panel's recommendations (Cordue et al. 2005) and made my first email contribution later that day. I indicated that, in my opinion, the revised report did follow the recommendations of the Panel and that the suggested reference points (based on  $SPR_{30\%}$ ) were appropriate. Graham later added his support to my position. Graham and I each made some editorial suggestions (e.g., Graham wanted explicit text indicating that age-0 snapper had been used).

Subsequent emails from Panel members indicated general acceptance that the report did follow the Panel's main recommendations. There were various editorial suggestions. There was general support for more explicit reference to the use of age-0 snapper in the model runs. One Panelist suggested a paragraph which was highly technical and I suggested that plainer language should be used. I also indicated that editing the report was outside of our TOR, and all such editorial

suggestions should simply be taken as such when the Assessment Team leader did a final edit of the report.

## **SUMMARY OF FINDINGS**

The main TOR for this review were:

(1) Review the red snapper assessment summary report and determine whether the report accurately represents the recommendations made by the Review Panel during the April 4-8, 2005 Review Workshop.

(2) Review the assessment summary report recommendations for Sustainable Fisheries Act management criteria and determine whether the relative merits and risks of alternative criteria are accurately and thoroughly presented.

The first TOR is definitely satisfied in that the report uses only the age-0 snapper runs as recommended by the Panel. Also, the projections use average recent recruitment as recommended by the Panel.

The second TOR is somewhat problematic in its wording. I do not think that it is possible in such a brief document to “accurately and thoroughly” present the “relative merits and risks of alternative criteria”. The revised report uses benchmarks based on  $SPR_{30\%}$  rather than yield per recruit based  $F_{MSY}$  and  $B_{MSY}$ . It is correctly argued that such benchmarks are less sensitive to the stock-recruitment relationship (which is poorly estimated) and the overall fishery selectivity pattern (which is defined by effort allocation amongst competing user groups). I support the proposed  $SPR_{30\%}$  based benchmarks. I see them as consistent with MSY concepts and believe that the 30% level is appropriate for red snapper. Certainly, such benchmarks are much more precautionary than those that can result from yield per recruit analysis for stocks with very high (assumed/estimated) steepness in the stock-recruitment relationship. In my opinion, given the required brevity of the document, the brief wording in the revised document under “Status Determination Criteria” adequately satisfies TOR 2.

## **CONCLUSIONS AND RECOMMENDATIONS**

The revised advisory report satisfies the TOR of this review in that it follows the recommendations of the SEDAR 7 Review Panel and it proposes sensible benchmark calculations. The document should be edited taking account of the comments provided by the Review Panel during the email discussions of 13-17 June 2005.

## **REFERENCES**

(see Appendix 1 for further references)

Cordue, P.L. et al. 2005. Gulf of Mexico Red Snapper Consensus Summary Report. Prepared by the SEDAR 7 Review Panel for the Gulf of Mexico Fishery Management Council. SEDAR 7, 4-7 April 2005, New Orleans, LA

## **APPENDIX 1: MATERIAL PROVIDED**

In addition to the following documents, two spreadsheets which contained detailed model results and plots were also provided.

Anon. (draft) a. 2005 Gulf red snapper advisory report. SEDAR 7 advisory report, draft 10 June. 10 p.

Anon. (draft) b. 2005 Gulf red snapper advisory report. SEDAR 7 advisory report with line numbers, draft 14 June. 10 p.

Anon. (draft) c. 2005 Gulf red snapper assessment summary. SEDAR 7 report, draft 6 June. 16 p.

Porch, C.E. 2005. Documentation of CATCHEM runs that model age 0 red snapper explicitly and projections of model age 0 and age 1 results under different future recruitment scenarios.

Appendix to Anon. (draft) c. 45 p.

## **APPENDIX 2: STATEMENT OF WORK**

### **Consulting Agreement between the University of Miami and Patrick Cordue**

#### **Statement of Work**

##### **Background**

South East Data, Assessment, and Review (SEDAR) is a joint process for stock assessment and review of the South Atlantic, Gulf of Mexico, and Caribbean Fishery Management Councils; NOAA Fisheries, SEFSC and SERO; and the Atlantic and Gulf States Marine Fisheries Commissions. SEDAR is organized around three workshops: data, assessment, and review. Input data are compiled during the data workshop, population models are developed during the assessment workshop, and an independent peer review of the data and assessment models is provided by the review workshop. The assessment review panel is composed of stock assessment experts, other scientists, and representatives of councils, fishing industries, and non-governmental conservation organizations. Final SEDAR documents include a data report produced by the data workshop, a stock assessment report produced by the assessment workshops, an advisory report and a review consensus report evaluating the assessment and drafted during the assessment review panel workshop, and the collected stock assessment documents considered in the SEDAR process.

The review workshop for SEDAR 7, Gulf Red Snapper, took place at the Holiday Inn Chateau Le Moyne in New Orleans, Louisiana, from April 4 through April 8, 2005. The Center for Independent Experts (CIE) provided a chair and a technical reviewer for the SEDAR 7 review workshop. At that time, the review panel decided that a different assessment approach should be used. Subsequently, a revised assessment summary report that follows this recommendation was developed by the assessment team.

NMFS-SEFSC requests the additional assistance of the two assessment scientists from the CIE who previously worked on the SEDAR 7 review panel. There are two requirements: 1) review the revised assessment summary report to evaluate consistency with review panel's previous recommendations, and 2) recommend a preferred benchmark that is appropriate for the advisory report under the Sustainable Fisheries Act. No consensus opinion between the two CIE consultants is sought.

The activities required under this Statement of Work shall be conducted electronically, so no travel is needed.

##### **Statement of Tasks**

The roles and responsibilities of each CIE designee are described in the tasks below.

(1) Review the red snapper assessment summary report and determine whether the report accurately represents the recommendations made by the review panel during the April 4 - 8, 2005 review workshop.

(2) Review the assessment summary report recommendations for Sustainable Fisheries Act management criteria and determine whether the relative merits and risks of alternative criteria are accurately and thoroughly presented.

(3) If the panel determines that the advisory report is insufficient with regard to Tasks 1 or 2, outline specific actions necessary to correct the deficiencies.

(4) Participate in e-mail exchanges with the other peer-review panelists that address Tasks 1-3 above.

(5) Provide to the CIE a report addressing Tasks 1-4 above. The report shall consist of background, description of review activities, summary of findings, conclusions/recommendations, and references. The report shall also include as separate appendices the bibliography of all materials provided and a copy of the statement of work.

### **Schedule**

It is estimated that the duties of each CIE consultant will require a maximum of five work days. The revised red snapper assessment report will be provided via e-mail to the CIE consultants no later than June 13, 2005. Please contact John Carmichael (SEDAR Coordinator; 843-571-4366 or [John.Carmichael@safmc.net](mailto:John.Carmichael@safmc.net)) for additional details. The e-mail exchanges of Task 4 shall take place during the week of June 13-17, 2005. Each consultant shall provide their individual written report for Task 5 to Dr. David Sampson, via e-mail to [David.Sampson@oregonstate.edu](mailto:David.Sampson@oregonstate.edu), and to Mr. Manoj Shrivani, via e-mail to [mshrivani@rsmas.miami.edu](mailto:mshrivani@rsmas.miami.edu) no later than the close of business on June 17, 2005.

### **Submission and Acceptance of CIE Reports**

The CIE shall provide the final consultants' reports in pdf format for approval by NOAA Fisheries to the COTR, Dr. Stephen K. Brown, no later than July 1, 2005. The COTR shall notify the CIE via e-mail regarding acceptance of the consultants' reports. Following the COTR's approval, the CIE shall provide the COTR with digital copies of the consultants' reports with digital signed cover letters, both in pdf format.